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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/782,971	02/23/2004	Mineyoshi Masuda	NITT.0195	7715
7590 Stanley P. Fisher Reed Smith LLP Suite 1400 3110 Fairview Park Drive Falls Church, VA 22042-4503			EXAMINER PHAN, TUANKHANH D	
			ART UNIT 2153	PAPER NUMBER
			MAIL DATE 11/02/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/782,971

Applicant(s)

MASUDA ET AL.

Examiner

TuanKhanh Phan

Art Unit

2153

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 2/23/2004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5 and 7-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Chellis et al. (US Pat. 6,901,446), hereinafter Chellis.

Regarding claim 1, Chellis teaches a load distribution method adopted by a client-server system comprising a plurality of clients and a server cluster (abstract), which includes a plurality of servers each used for processing requests made by said clients and allows the number of said servers to be changed dynamically, wherein each of said clients (i.e. **a new server may come online and dynamically allocating resource provided**, col. 5, lines 20-49):

detects the number of servers composing said server cluster (i.e. **resource instance table for the availability of the new resources**, col.. 5, lines 25-30);

right after detecting an increase in said number of servers, **sets** an allocation of requests transmissible out to a newly added server at a value small in comparison with that set for each of said other servers (i.e. **reallocation request to migrate a number of users from one or more servers to the new**

server is an obvious variation of the requests transmissible out to a newly added server, col. 5, lines 40-46); and

transmits out requests to said servers on the basis of said set allocation (col. 5, lines 40-46).

Regarding claim 2, Chellis teaches a load distribution method according to claim 1, wherein each of said clients sets said allocation of requests transmissible out to said newly added server at a value increasing with the lapse of time (i.e. **resource value allocation is changing over a time period**, col. 7, lines 25-30).

Regarding claim 3, Chellis a load distribution method according to claim 1, wherein said detection of an increase in said number of said servers is used as a trigger of each of said clients to set said allocation of requests transmissible out to said newly added server at a value small in comparison with that set for each of said other servers (e.g. **the excessive 45-client is smaller than the capacity 100 of the new server**, col. 5, lines 36-45; col. 8, lines 38-45).

Regarding claim 4, Chellis teaches a load distribution method according to claim 1, wherein each of said clients: acquires information on a performance of said newly added server; and sets said allocation of requests transmissible out to said newly added server on the basis of said acquired information (col. 11, lines 20-25; col. 19, lines 38-47).

Regarding claim 5, Chellis teaches a load distribution method according to claim 1, wherein each of said clients: acquires information on a state of said newly added server; and sets said allocation of requests transmissible out to said newly added server

on the basis of said acquired information (i.e. **allocation status and the availability of a resource is based on the acquired state information**, col. 4, lines 15-23).

Regarding claim 7, Chellis teaches a load distribution method according to claim 1 wherein: said client-server system has a management server for managing the number of servers composing said server cluster (col. 10, lines 5-12); and a notice received from said management server as a notice of an increase in said number of said servers is used as a trigger of each of said clients to set said allocation of requests transmissible out to said newly added server at a value small in comparison with that set for each of said other servers (col. 10, lines 5-12).

Regarding claim 8, Chellis teaches a load distribution method according to claim 1 wherein: said client-server system has a management server for acquiring information on a performance of each of said servers (col. 11, lines 20-25; col. 19, lines 38-47); and each of said clients:

acquires said information on a performance of each of said servers (col. 11, lines 20-25; col. 19, lines 38-47);

sets said allocation of requests transmissible out to said newly added server on the basis of said acquired information (col. 5, lines 40-46).

Regarding claim 9, Chellis teaches a load distribution method according to claim 1, wherein each of said clients sets said allocation of requests transmissible out to said newly added server by setting the number of connections for communications with said servers (col. 21, lines 15-25).

Art Unit: 2153

Regarding claim 10, Chellis teaches a load distribution method according to claim 1, wherein each of said clients sets an allocation of requests transmissible out to each of said servers by changing quotas each set for every individual one of said servers (col. 3, lines 35-45) as an allotment of requests transmissible out to said individual server (col. 3, lines 43-49).

Regarding claim 11, Chellis teaches a load distribution method according to claim 10 wherein: said client-server system has storage apparatus connected to said servers (col. 13, lines 50-59); each of said servers holds directory information indicating storage locations of files stored in said storage apparatus (col. 13, lines 50-59); and each of said clients sets said allocation of requests transmissible out to each of said servers by changing quotas each provided for every individual one of said servers as an allotment of said directory information stored in said individual server where said allotment of said directory information storable in said individual server represents an allotment of requests transmissible out to said individual server (i.e. resource tree, col. 13, lines 45-62).

Regarding claim 12, Chellis teaches a client-server system comprising a plurality of clients and a server cluster, which includes a plurality of servers each used for processing requests made by said clients and allows the number of said servers to be changed dynamically, wherein:

each of said clients includes: a load-setting unit for setting an allocation of requests transmissible out to each of said servers (col. 4, lines 28-35);

a server-count detection unit for detecting the number of servers composing said server cluster (col. 5, lines 25-30); and

a load distribution unit for transmitting out requests to each of said servers on the basis of allocations each set by said load-setting unit as said allocation of requests transmissible out to each of said servers (col. 5, lines 40-46); and

right after said server-count detection unit detects an increase in said number of servers, said load-setting unit sets an allocation of requests transmissible out to a newly added server at a value small in comparison with that set for each of said other servers (col. 5, lines 40-46).

Regarding claim 13, Chellis teaches a client-server system according to claim 12 wherein: each of said clients has an allotment-holding unit for holding an allotment set for every individual one of said servers (i.e. **allotment indication of 10 users per server is given as an example**, col. 5, lines 30-40) as an allotment of requests transmissible out to said individual server; and said load-setting unit sets an allocation of requests transmissible out to each of said servers by changing quotas each set for every individual one of said servers as said allotment of requests transmissible out to said individual server (col. 5, lines 30-40).

Regarding claim 14, Chellis teaches a client-server system according to claim 13, said client-server system further comprising storage apparatus connected to said servers wherein: each of said servers is provided with a directory- information-holding unit for holding directory information indicating storage locations of files stored in said storage apparatus (col. 13, lines 50-59); said clients are provided with a management

server for holding quotas each provided for every individual one of said servers as an allotment of said directory information storable in said individual server (col. 13, lines 50-59); and said load-setting unit sets said allocation of requests transmissible out to each of said servers by changing said quotas each provided for every individual one of said servers as an allotment of said directory information stored in said individual server (col. 5, lines 40-46).

Regarding claim 15, Chellis teaches a load distribution method according to claim 2 wherein: said client-server system has a management server for managing the number of servers composing said server cluster (col. 10, lines 5-12); and a notice received from said management server as a notice of an increase in said number of said servers is used as a trigger of each of said clients to set said allocation of requests transmissible out to said newly added server at a value small in comparison with that set for each of said other servers (col. 21, lines 15-25).

Regarding claim 16, Chellis teaches a load distribution method according to claim 2 (see the discussion of the claim 2 above), wherein each of said clients sets said allocation of requests transmissible out to said newly added server by setting the number of connections for communications with said servers (i.e. **indication of 10 connections per server is given as an example**, col. 5, lines 30-40).

Regarding claim 17, Chellis teaches a load distribution method according to claim 3, wherein each of said clients sets said allocation of requests transmissible out to said newly added server by setting the number of connections for communications with said servers (i.e. **setting number of concurrent users could be read as the setting**

number of connections for communications – each user is a connection, col. 3, lines 49-55; col. 5, lines 30-40).

Regarding claim 18, Chellis teaches a load distribution method according to claim 4, wherein each of said clients sets said allocation of requests transmissible out to said newly added server by setting the number of connections for communications with said servers (col. 3, lines 49-55; col. 5, lines 30-40).

Regarding claim 19, Chellis teaches a load distribution method according to claim 5, wherein each of said clients sets said allocation of requests transmissible out to said newly added server by setting the number of connections for communications with said servers (col. 3, lines 49-55; col. 5, lines 30-40).

Regarding claim 20, Chellis teaches a load distribution method according to claim 6, wherein each of said clients sets said allocation of requests transmissible out to said newly added server by setting the number of connections for communications with said servers (col. 3, lines 49-55; col. 5, lines 30-40).

Regarding claim 21, Chellis teaches a load distribution method according to claim 7, wherein each of said clients sets said allocation of requests transmissible out to said newly added server by setting the number of connections for communications with said servers (col. 3, lines 49-55; col. 5, lines 30-40).

Regarding claim 22, Chellis teaches a load distribution method according to claim 15, wherein each of said clients sets said allocation of requests transmissible out to said newly added server by setting the number of connections for communications with said servers (col. 3, lines 49-55; col. 5, lines 30-40).

Regarding claim 23, Chellis teaches a load distribution method according to claim 8, wherein each of said clients sets said allocation of requests transmissible out to said newly added server by setting the number of connections for communications with said servers (col. 3, lines 49-55; col. 5, lines 30-40).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chellis as in view of Gerszberg et al. (US Pat. 6,385,693).

Regarding claim 6, Chellis teaches a load distribution method according to claim 5, wherein said information on a state of said newly added server but does not explicitly includes at least a cache hit rate, a cache utilization ratio or the number of requests each waiting for a processing turn. However, in the same field of load distribution added server, Gerszberg et al. disclose server includes cache hit rate to address reallocation of server traffic and load distribution (col. 10, lines 43-61). It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the cache hit rate and utilization taught by Gerszberg et al. into the server load distribution taught by Chellis to maintain uniform, fast and efficient network performance (Gerszberg et al., col. 10, lines 50-52).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Chen et al. US Pat. 7,062,556. Chen et al. disclose a load balancing method in a communication network.

Major et al. US Pat. 6,862,606. Major et al. disclose a system and method for partitioning address space in a proxy cache server cluster.

Narendran et al. US Pat. 6,070,191. Narendran et al. disclose data distribution techniques for load-balanced fault-tolerant web access.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TuanKhanh Phan whose telephone number is 571-270-3047. The examiner can normally be reached on Mon to Fri, 8:00am to 4:30pm EST, 1st Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenton B. Burgess can be reached on 571-272-3949. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2153

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TKP

Thu Ha Nguyen
THU HA NGUYEN
PRIMARY EXAMINER